

Appl. No. : 10/788,905
Filed : February 26, 2004

REMARKS

The foregoing amendments and the following remarks are responsive to the January 30, 2006 Office Action. Claims 51 and 54 are amended and Claims 52 and 53 are cancelled. Further, Claims 1-25 were previously cancelled and Claims 26-50 remain as previously presented. Thus, Claims 26-51 and 54 are presented for further consideration.

Response to Rejection of Claims 26-54 under 35 U.S.C. § 102(b)

In the January 30, 2006 Office Action, the Examiner rejects Claims 26-54 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,615,667 to Roy ("Roy"). For the reasons stated below, Applicant submits that Roy does not disclose all the limitations of the claims as amended.

For example, Claim 26 recites, inter alia, that "at least the area surrounding each gate and the base end of each mandrel comprises a material having a high heat conductivity to allow for rapid cooling of plastic melt when placed in the mold." Roy fails to disclose the use of high heat conductivity materials on the cavity portion of the mold. Instead, Roy teaches the use of a bimetallic structure only on the nose or tip of the core (mandrel portion of the mold). As is discussed in greater detail below, this design distinction arises from the different types of apparatuses in which the respective molds are intended to be used. In Roy, the mold for making preforms is included in the first stage of a 2-step injection blow molding process. Namely, after the preforms are injection molded in Station A, they are immediately transferred to Station B, located within the same apparatus, to be blow molded into the desired container shape. In Column 9, Lines 14-21, Roy recites, "The present invention is being described with reference to an injection blow molding apparatus utilizing a rotating turret (a Piotrowski turret), in which the turret is rotated 180 degrees from an injection molding station at which a preform is injection molded to a blow molding station, with the blow molding and the injection molding being independently carried out possibly simultaneously." Conversely, the preforms manufactured from the molds described in the subject application are not intended to be immediately blow molded.

According to the specification in Roy, the purpose of the bimetallic structure is "to obtain the desired stretching effect for orienting the container material during the blow molding operation while the cooler portions of the preform, which receive the least amount of stretch, act

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as a piston to stretch the areas that are at the orienting temperature.” In fact, Roy explicitly recites, “for this purpose, different parts of the preform core are formed of materials, preferably metals, having different coefficients of thermal conductivity.” Thus, as recited in Roy, “when the tip of the preform is cooled to a temperature below that of the preform body..., the tip serves, in effect, as a plunger during the blowing and thereby aids orienting the resin during blowing.” See Column 7, Lines 30-56 of Roy.

On the other hand, as discussed in paragraph [0167] of the subject patent application, the mandrel and cavities of the mold are constructed, at least in part, of high heat transfer materials to assist in achieving lower cycle times. In paragraph [0227], the Applicant discloses, “to speed cooling in the gate area of the mold cavity in order to decrease cycle time, inserts 310 of an especially high heat transfer material such as Ampoloy can be disposed in the mold in the gate area 308. These Ampoloy inserts 310 will withdraw heat at an especially fast rate.” Therefore, the temperature of the preform does not have to be regulated in preparation for immediate blow molding.

In fact, it appears that the use of high heat transfer materials on the cavity portion of the mold would be detrimental to the blow molding phase in Roy which immediately follows the injection molding phase. This is because the preform temperature on the cavity side must still be maintained at a sufficiently high level to allow it to be blow molded into a desired shape. Thus, there is no motivation to include a high heat transfer material on the cavity portion of the mold in Roy.

Claims 33, 43 and 50, as well as amended Claim 51, all include the same or a similar limitation as Claim 26 related to the use of high heat transfer material on the cavity portion of the mold. For example, Claim 33 states, “wherein at least the area surrounding each gate comprises a high heat conductivity material.” Likewise, Claim 43 recites, “the lower cavity surface comprising a first body of high heat transfer material.” Further, Claim 50 states, “wherein each cavity comprises a gate, wherein at least a portion of the cavity surrounding the gate comprises a high heat transfer material.” Similarly, amended Claim 51 recites, “wherein at least a portion of the mandrel and the cavity comprises a high heat transfer material.”

Consequently, Applicant submits that Claims 26, 33, 43 and 50, as well as amended Claim 51, are patentably distinguished over Roy. Thus, Applicant respectfully requests that the Examiner withdraw the rejection of Claims 26-51 and 54. Claims 27-32 depend from Claim 26,

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Claims 34-42 depend from Claim 33, Claims 44-49 depend from Claim 43 and Claim 54 depends from Claim 51. Therefore, Claims 27-32, 34-42, 44-49, 43 and 54 are patentable for at least the same reasons that Claims 26, 33, 43, 50 and 51 are patentable over the applied art. Accordingly, allowance of Claims 26-51 and 54 is respectfully requested.

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Summary

For the foregoing reasons, Applicant submits that Claims 26-51 and 54 are in condition for allowance and Applicant respectfully requests such action. Should the Examiner have any remaining concerns which might prevent the prompt allowance of the application, the Examiner is respectfully invited to contact the undersigned at the telephone number appearing below.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

Dated: June 9, 2006

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